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SRI LANKA

Cutting into Karapitiya Hospital's Solid Waste Problem

Turning food waste into energy . . .



“Normally kitchen waste is seen as something unpleasant and of no value, but when it comes back through the system as biogas then we see its importance.”

**Dayaratne, Cook
Karapitiya Hospital**

Challenge

The Karapitiya Hospital in Galle serves as the main hospital in southern Sri Lanka, and is also the primary teaching hospital in the region. The large number of patients and visitors using the hospital facilities generates high volumes of waste. Every day, about two tractor loads of solid waste accumulate at the hospital. Often inadequate garbage collection and the disposal process by the city result in stagnant garbage that exposes the patients and visitors to unhygienic conditions.

Initiative

USAID supported HELP-O, a Galle-based NGO, to establish a waste-to-energy program that converts food waste into biogas. A local manufacturer fabricated a biogas unit that is used for cooking and heating water on three of the kitchen's 15 burners. To isolate the food waste that “fuels” the biogas unit from other garbage, the hospital set up labeled separation bins in the wards and at the entrance. Training sessions, as well as awareness programs using posters and multimedia material, were carried out to educate the public, patients and hospital staff about the initiative. The hospital's public address system is used effectively to remind people about the proper methods of waste disposal. The enthusiasm and hard work of the hospital staff – from the supervising doctors to the nurses and cooks is what made the biggest difference in making the program a success.

Results

This is the first biogas initiative of such magnitude to be successfully utilized in a hospital in Sri Lanka. Multiple benefits to the hospital, municipality and patients include:

- Reducing consumption of liquid petroleum gas cylinders which has saved the hospital approximately Rs. 20,000 (\$200) per month.
- Using the slurry, the by-product of the biogas as a fertilizer in the vegetable garden within the hospital premises, which yields produce that is in high demand by the hospital staff.
- Creating marketable recyclables like paper and plastic from the waste segregation process, which has brought the hospital extra income.
- Turning the facility into a “teaching hospital” in more ways than one: the visiting public, through the educational efforts of the hospital staff, have learned about garbage separation, recycling and making fuel from biodegradable waste.

The Karapitiya Hospital staff hopes that others will adopt and benefit from this technology and process. HELP-O, with USAID/US-AEP assistance, is working to harness Karapitiya Hospital's enthusiasm and success to spread the word to encourage similar biogas systems in other hospitals, and other facilities like restaurants that generate large quantities of food waste.